

CLAIMS

What is claimed is:

1. An interleukin-2 mutein having a mammalian glycosylation pattern.
2. The interleukin-2 mutein of claim 1 wherein asparagine at position 88 of wild type interleukin 2 is substituted with arginine.
3. The mutein of claim 2 wherein the glycosylation is O-linked.
4. The mutein of claim 3 wherein the glycosylation comprises O-linked GalNAc, GalNAc- β -Gal, and GalNAc- β -Gal- α -NeuNAc.
5. A pharmaceutical preparation comprising the mutein of claim 4 without a toxic solubilizing agent.
6. A mammalian cell line encoding the interleukin-2 mutein of claim 1.
7. The mammalian cell line of claim 6 wherein the interleukin-2 mutein has the asparagine at position 88 of wild type interleukin 2 substituted with arginine.
8. The mammalian cell line of claim 7 wherein the glycosylation is O-linked.
9. The mammalian cell line of claim 8 wherein the glycosylation comprises O-linked GalNAc, GalNAc- β -Gal, and GalNAc- β -Gal- α -NeuNAc.
10. The cell line of claim 6 wherein the cell line is a CHO cell line.

11. A plasmid encoding the interleukin-2 mutein of claim 1 as shown in the plasmid map of the Figure.
12. The plasmid of claim 11 wherein the interleukin 2 mutein has the asparagine at position 88 of wild type interleukin 2 substituted with arginine.
13. A method of producing an interleukin-2 mutein comprising the steps of
 - a) obtaining a vector comprising a nucleic acid sequence coding for the interleukin-2 mutein, and
 - b) introducing the vector into a mammalian cell capable of expressing the interleukin-2 mutein.
14. The method of producing an interleukin-2 mutein of claim 13 wherein the interleukin-2 mutein has the asparagine at position 88 of wild type interleukin-2 substituted with arginine.